

# Why Should We Recycle?

The recycling and ethical disposal of waste products and materials contributes to sustainability and a greener planet in many ways:

1. By diverting waste from landfills, it prevents things like paper, packaging, and food from clogging up landfills.
2. It conserves natural resources. Recycling paper, plastics, metal and glass means that virgin materials don't need to be extracted from sensitive ecosystems.
3. Extracting, processing, and transporting virgin materials from the Earth is more intensive than the recycling process, so energy is also conserved.
4. The Green Economy is an ever-growing component of industry that focuses on building and maintaining clean, renewable energy infrastructure. Recycling contributes to a growing, more sustainable economy.

## Paper and Packaging Recycling

Once collected, your materials are transported to a material recovery facility and added to a conveyor belt for further sorting. Non-recyclables are removed from the belt, and a series of separators ranging from magnetic separators and optical sorters work to group each type of materials into their respective categories.

Once grouped and segregated, materials are baled, sold as a commodity, and transported to a manufacturer to create renewed materials ranging from packaging to consumer goods.

- Plastics are put through a shredder, washed and pelletized and can be used to create materials such as fill for winter jackets or park benches.
- Paper is pulped, cleaned, screened, and rolled and may one day become paper for kids craft projects or paper-based plant pots.
- Metals are shredded, smelted, and rolled into sheets, wire, or bar for use in infrastructure projects or creating new appliances.

Did you know?

- Recycling a single run of the Sunday New York Times can save 75,000 trees – recycling this newspaper saves 12,000 cubic yards of landfill space, 16,000,000 kilowatt hours (enough to power 18,000 BC homes for one month), 115,000,000 litres of water, and 118,000 kgs of air pollution.
- Recycling aluminum and plastics saves 95% of the energy required to process virgin materials from the Earth. A new aluminum or plastic product can be created and back on the shelves within 60 days; it can take up to 450 years for a plastic bottle to break down in nature.

# Organic Recycling

After your green waste is picked up, it is brought to a local facility for decomposition through a process called anaerobic digestion. This process is carried out by microorganisms in a sealed environment without the presence of oxygen to create biogas and liquid and solid byproducts. The biogas, mostly methane and carbon dioxide, is collected for later use as a fuel for vehicles or to create electricity or heating for homes. Solid and liquid fertilizers can be used as additives for soils, a clean fill for land, or bedding for livestock.

Alternative processes may use insect larvae to feed on clean, pre-consumer organic waste, to create sustainable animal feed ingredients and organic fertilizers. Additionally, spent grains from customers such as breweries can be used as a dietary additive to meet nutritional requirements for farm animals such as cattle and chickens.

Did you know?

- Earth loses 75-100 gigatonnes of arable topsoil each year – composting returns nutrients back into the topsoil. Healthy organic matter can retain up to 20x its weight in water, providing additives to topsoil makes it more resistant to drought.
- 50% of typical household waste is compostable. By diverting green waste away from landfills, organics recycling can help to reduce Greater Vancouver methane production by up to 67%.

## Where Does the Waste Go?

Most Metro Vancouver household waste is brought to either the Delta or Cache Creek landfills. Some waste, however, is diverted to a Waste to Energy Incinerator instead. Here, the high energy potential of the waste is harnessed and converted into electricity and fed into the local BC Hydro power grid. The electricity produced here is distributed for use in approximately 16,000 local homes and businesses.

Did you know?

- Greater Vancouver contributed 382,711 tonnes of municipal solid waste to landfills in 2015, a contribution of over 40% of the regions waste output.
- North America has 8% of the world's population, consumes 1/3 of the world's resources and produces almost half of the world's non-organic garbage